

Maternity information factsheet

Vitamin K supplements for newborn babies

When your baby is born, you will be asked whether you would like them to have a vitamin K supplement.

The Department of Health recommends that all babies are given a vitamin K supplement at birth. We have given you this factsheet to explain why this is recommended and what your options are.

What is vitamin K?

Vitamin K is a vitamin the body needs for blood clotting and to prevent abnormal bleeding. Vitamin K is found in many foods, especially green leafy vegetables and oils such as olive oil. It is also produced by the bacteria that live in your intestine.

Why do newborn babies need vitamin K supplements?

When your baby is born, the amount of vitamin K stored in their liver is between 30 and 60% of the amount stored by an adult.

It is not known why this is the case. Very little vitamin K is passed from you to your baby across your placenta. It also takes time for the bacteria in your baby's intestine to produce vitamin K. If your baby does not receive additional vitamin K, their stores can quickly become depleted.

Breast milk contains small amounts of vitamin K. Breastfeeding your baby in the first hour after they are born and making sure your baby feeds regularly and efficiently will replenish your baby's vitamin K levels. Most babies will have stored a level of vitamin K similar to that found in an adult by the time they are six weeks old. This is usually enough to prevent problems.

However, a small number of babies develop a rare but serious disorder called 'vitamin K deficiency bleeding' (VKDB), previously known as 'haemorrhagic disease of the newborn'. This disorder can cause bleeding from the nose, mouth, umbilicus (tummy button), bowels or into the brain. Bleeding in the brain can cause brain damage or can even be fatal.

Please read the 'What happens when a baby develops VKDB?' section on page 4 for more information.

However, the risk of your baby developing VKDB is virtually eliminated if your baby is given a vitamin K supplement. If the appropriate dose is given at the appropriate time, the likelihood of your baby developing VKDB is reduced to 1 in 100,000.

This is why the Department of Health recommends that all babies have a vitamin K supplement when they are born.

How is vitamin K given to a newborn baby?

Soon after you give birth, your midwife or your baby's paediatrician (specialist children's doctor) will ask you whether you would like your baby to have vitamin K supplements.

During your pregnancy you will need to decide:

- whether you would like vitamin K to be given to your baby.
- whether you would like your baby to be given vitamin K by injection (intramuscularly) or by mouth (orally)

Vitamin K by injection

An injection of vitamin K is given into the muscle of your baby's thigh shortly after birth. For almost all babies, this will prevent VKDB. The injection does not need to be repeated.

As with any injection, your baby will feel some pain and may experience a little bleeding and bruising in the muscle at the place where the injection goes in. Infection at the injection site is rare.

If your baby is given vitamin K by injection, their levels will remain higher for longer than those babies who are given vitamin K orally (by mouth). This is because it remains stored in the muscle where it was injected.

Your baby's paediatrician (specialist children's doctor) will tell you if there's any reason why your baby should not have vitamin K by injection.

Please note: Due to the higher risks of bleeding and the potentially serious consequences, we give vitamin K by injection to all babies who are born prematurely, or are admitted to the neonatal unit because they are unwell. If you have any questions or concerns about this, please ask your midwife about it at one of your antenatal appointments.

Vitamin K by mouth

Your baby is given vitamin K as oral drops (via their mouth) in either two or three doses during their first month:

- your midwife will give your baby a 2mg dose shortly after birth
- you will need to give your baby a second 2mg dose when your baby is between four and seven days old
- if you are exclusively breastfeeding your baby, you will need to give them a third 2mg dose when they are one month old. It is essential that you make sure the third dose is given.

If you are using formula milk, there is no need to repeat the vitamin K after the first two doses, because additional vitamin K is added to formula milk.

Please note: Breastfeeding has many benefits for you and your baby. The World Health Organisation recommends exclusive breastfeeding for your baby's first six months and breastfeeding for up to two years (and beyond if you choose). For information about the benefits of breastfeeding, please visit www.uhs.nhs.uk/maternity or speak to your midwife.

Maternity information factsheet

The hospital pharmacy will supply your baby's oral vitamin K drops. They are branded as 'Neokay' and are stored in capsules.

- Each capsule contains 1mg of vitamin K, so for a 2mg dose, you will need to give your baby the contents of two capsules.
- When it is time to give your baby their vitamin K drops, cut off the narrow tip of the Neokay capsule and squeeze the liquid into your baby's mouth.

If you have any questions or concerns about giving your baby their vitamin K drops, please speak to your midwife or health visitor.

The oral drops will only be effective at reducing the risk of VKDB if your baby absorbs the doses they are given. We recommend giving your baby their oral vitamin K drops immediately after a feed of breast milk or formula, because the fat in the milk helps the vitamin K to be absorbed. Vitamin K has a bitter taste. If your baby spits out the vitamin K or if they are sick within three hours of having the dose, you will need to give them another dose.

If your baby has received their oral vitamin K doses as described above and is later considered to be at high risk of VKDB, your GP may prescribe the vitamin K injection or further oral drops (1mg per week for a minimum of 12 weeks).

Choosing not to have vitamin K

The Department of Health recommends giving vitamin K to all newborn babies because of its proven benefits in reducing the risk of VKDB.

However, it is your decision as to whether your baby receives extra vitamin K and how it is given. The purpose of this factsheet is to help you make an informed decision. You may decide that your baby should not receive vitamin K, or you may prefer a modified course. In these circumstances, the risk of bleeding is increased, and you must be aware of the warning signs of VKDB.

We may recommend you reconsider your decision if your baby is born prematurely, is unwell, or has feeding problems or if there are other unforeseen circumstances where additional vitamin K is beneficial.

Please note: If your baby needs to have a surgical procedure, such as the separation of a tongue tie, they may need to have at least one vitamin K injection or two doses of oral vitamin K. If you have any questions or concerns about this, please ask your midwife, paediatrician or GP.

Risk factors for VKDB

Babies are more likely to have VKDB if they:

- have had a complicated birth
- are born prematurely
- need to have surgery
- are unwell for any reason
- have liver disease (they may have prolonged jaundice, pale stools or dark urine)
- find it hard to absorb feeds

Maternity information factsheet

Babies without risk factors can also have bleeding. About a quarter of babies who have bleeding have no previously identified risk factors.

It is important that you tell your obstetrician (the doctor in charge of your care during your pregnancy and/or when you give birth) if you are prescribed anticonvulsants or anticoagulants during your pregnancy. Your baby will need to have vitamin K supplements as soon as possible when they are born, and your obstetrician may advise you to take vitamin K supplements while you are pregnant.

What happens when a baby develops VKDB?

Early onset VKDB (within the first 24 hours of birth)

Early onset VKDB causes bleeding under the skin or in the brain and abdomen. It is rare and almost always affects babies whose mothers have taken specific medications during pregnancy, including anticonvulsants (medicines to reduce seizures) and anticoagulants (medicines to reduce blood clotting). These medicines affect the way the body uses vitamin K.

Classical onset VKDB (within the first week after birth)

Classical onset VKDB causes bleeding from the mouth, umbilicus (tummy button) or rectum (back passage). Your baby may vomit blood, have blood in their poo, experience nosebleeds or have unexplained bruises. If these symptoms are not treated, there may also be bleeding in the brain, which can be fatal.

Classical onset VKDB affects 1 in every 2,000 babies and is usually caused by a low level of vitamin K in a baby's diet. Check your baby carefully for symptoms, particularly if your baby has struggled with breastfeeding.

Late onset VKDB (after the first week but within your baby's first year)

Late onset VKDB is thought to affect approximately 1 in 11,000 babies if a vitamin K supplement is not given at birth.

Late onset VKDB can often develop without warning. Over 50% of babies who are diagnosed with late onset VKDB will have bleeding in the brain (intracranial bleeding). About a third of these babies will suffer a serious permanent brain injury which can be fatal. Late onset VKDB may develop if the baby has undiagnosed liver disease or if they were not given vitamin K at birth.

Please read the 'Warning signs of VKDB' section on page 5 of this factsheet so that you know what to look out for.

How is VKDB treated?

Babies who have symptoms of VKDB will need treatment in hospital. Your baby will be given vitamin K and depending on the severity of their symptoms, they may be given blood products to improve their blood clotting ability.

Babies who have had bleeding in their brain (intracranial haemorrhage) will usually need to have surgery. The outcome depends on the severity and location of the haemorrhage. Babies who do not have an intracranial haemorrhage and are otherwise healthy (without underlying liver problems) usually respond well to treatment and make a good recovery.

Maternity information factsheet

Warning signs of VKDB

Contact your midwife, health visitor or GP if your baby:

- **is having feeding difficulties.** Your baby may be getting enough nutrition but may not be building up enough vitamin K in their liver. If you have decided not to give your baby a vitamin K supplement, you may wish to reconsider your decision if your baby is having feeding difficulties in the first couple of days after birth.
- **has persistent or late jaundice** (yellowing of your baby's skin and eyes). Jaundice is common in the first few days after birth, but if it carries on or develops later it can be a sign of problems with your baby's liver, even if you have given your baby a vitamin K supplement. Babies with jaundice may be sleepy and less interested in feeding. Contact your midwife, health visitor or GP urgently if your baby is not gaining weight properly, has pale stools (poo) or dark urine, or is ill in any way. More information about jaundice is available from www.nhs.uk
- **is sleepier or fussier than usual**
- **vomits or has diarrhoea**
- **has a bulging around the fontanelle** (soft spot on their head)

Call 999 for an ambulance or take your baby to the nearest emergency department if:

- **your baby has unexpected and unexplained bleeding or bruising anywhere on their body.** Bleeding may come from your baby's umbilical cord (tummy button), nose or mouth or there may be blood in their stools (poo), making them darker than usual. Many babies who later suffer bleeding in the brain have had prior minor bleeds from the skin, nose or mouth.
- **your baby has unexpected fits or seizures**
- **your baby is having trouble breathing**
- **you are unable to wake your baby**

Please note: If your baby has had antibiotics during the first few days of life, please make sure that the healthcare team caring for your baby in the first month are aware.

Please note: If your baby did not receive vitamin K at birth, make sure the healthcare team caring for your baby know this. Giving vitamin K can increase your baby's levels of vitamin K if they are low and stop internal bleeding if it has occurred.

Always seek urgent medical attention if you suspect your baby is unwell.

Approximately a third of babies will experience severe bleeding without showing early symptoms. Although it is not possible to identify every baby who is at risk of VKDB, there are warning signs. Recognising these warning signs and acting upon them quickly will allow prompt identification of VKDB and increase the likelihood of treatment being effective.

Maternity information factsheet

Contact us

If you would like to discuss vitamin K in further detail during your pregnancy, please speak to your midwife at your next appointment. If you have any questions after your baby is born, please speak to the midwife responsible for your care or a paediatrician.

If you have any non-urgent concerns about your baby during their first two weeks please call:

Community midwifery co-ordinator

Telephone: **07786 266529** (between 7.30am and 5.30pm)

Broadlands Birth Centre

Telephone: **023 8120 6012** (out of hours)

Maternity infant feeding team

Telephone: **07786 267584** (voicemail available)

Always seek urgent medical attention if you suspect your baby is unwell. In an emergency, call 999.

If you are a patient at one of our hospitals and need this document translated, or in another format such as easy read, large print, Braille or audio, please telephone **0800 484 0135** or email **patientsupporthub@uhs.nhs.uk**

For help preparing for your visit, arranging an interpreter or accessing the hospital, please visit **www.uhs.nhs.uk/additionalsupport**

Join our family of charity supporters with a monthly donation! It's a wonderful way to show your ongoing support of our patients and staff.

Scan the QR code or visit southamptonhospitalscharity.org/donate



**Southampton
Hospitals
Charity**

Charity Registration Numbers 1051543

